

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies
☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-039-30950	² Pool Code 71629	³ Pool Name Basin Fruitland Coal
⁴ Property Code 35643	⁵ Property Name Carracas 13B	⁶ Well Number 16H
⁷ OGRID No. 162928	⁸ Operator Name ENERGEN RESOURCES CORPORATION	⁹ Elevation 6,961'

¹⁰ Surface Location

UL or lot no. A	Section 24	Township 32N	Range 04W	Lot Idn	Feet from the 611'	North/South line North	Feet from the 1,059'	East/West line East	County Rio Arriba
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no. F	Section	Township 32N	Range 04W	Lot Idn	Feet from the 1,382'	North/South line North	Feet from the 1,737'	East/West line West	County Rio Arriba
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¹² Dedicated Acres 640 ac.	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. NMNM112654
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RCVD NOV 15 11
OIL CONS. DIV.

DIST. 3

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

				¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>[Signature]</i> 10/26/11 11-14-11 Signature Date Andrew Soto Printed Name	
				¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. August 11, 2009 Date of Survey Original Survey Conducted and Recorded By: David R. Russell 10201 Certificate Number	

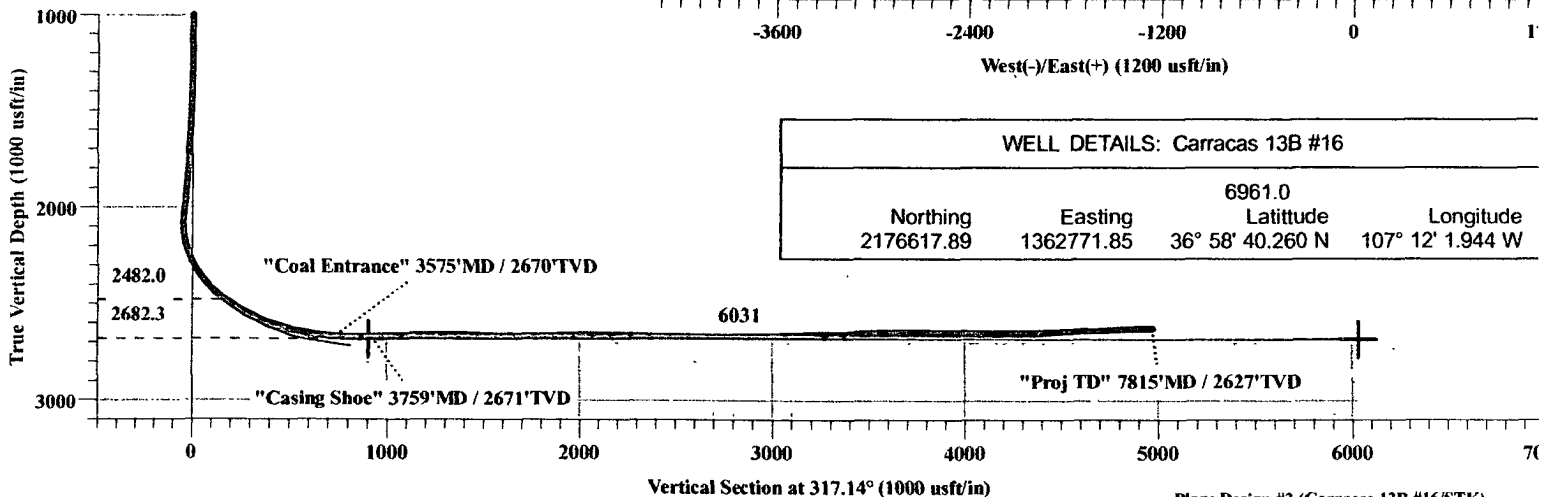
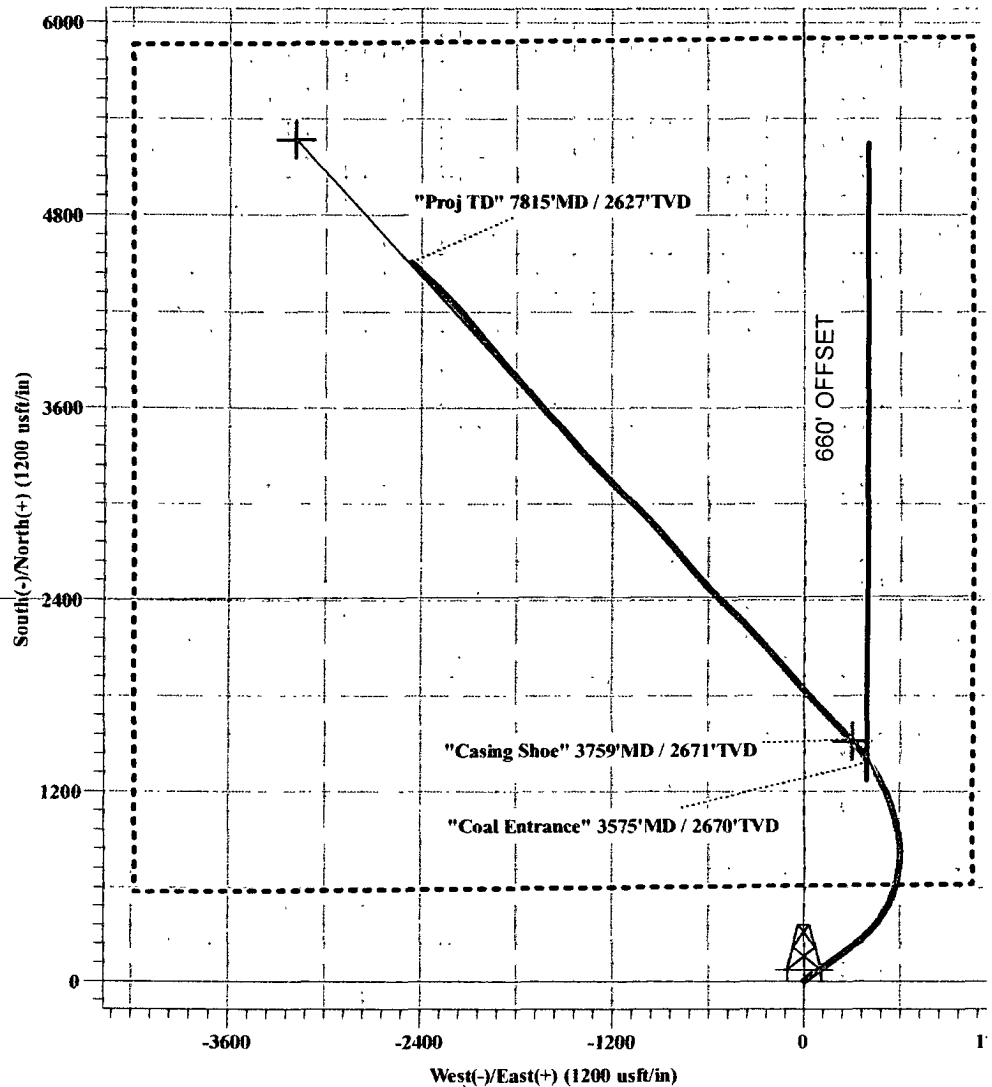
Carracas 13B #16
Sec24 T32N-R04W - 13B
Rio Arriba Co. NM
GL: 6961' / KB: 14'

30-039-30950

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape Point
LAND-13B	2682.0	1511.0	297.9	2178125.83	1363084.85	Point
TD-13B	2682.0	5268.6	-3189.3	2181918.06	1359635.31	Point

EOW
No Hardline
Crossed



WELL DETAILS: Carracas 13B #16

North	East	6961.0	Latitude	Longitude
2176617.89	1362771.85	36° 58' 40.260 N	107° 12' 1.944 W	

Energen Resources

**Rio Arriba County
Sec24 T32N-R04W - 13B
Carracas 13B #16**

STK

Design: STK

Standard Survey Report

05-October, 2011



Survey Report

Company: Energen Resources
 Project: Rio Arriba County
 Site: Sec24 T32N-R04W - 13B
 Well: Carracas 13B #16
 Wellbore: STK
 Design: STK

Local Co-ordinate Reference: Well Carracas 13B #16
 TVD Reference: WELL @ 6975.0usft (Original Well Elev)
 MD Reference: WELL @ 6975.0usft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

Project	Rio Arriba County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site	Sec24 T32N-R04W - 13B				
Site Position:		Northing:	2,176,617.89 usft	Latitude:	36° 58' 40.260 N
From:	Lat/Long	Easting:	1,362,771.85 usft	Longitude:	107° 12' 1.944 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.57 °

Well	Carracas 13B #16					
Well Position	+N-S	0.0 usft	Northing:	2,176,617.89 usft	Latitude:	36° 58' 40.260 N
	+E-W	0.0 usft	Easting:	1,362,771.85 usft	Longitude:	107° 12' 1.944 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	6,961.0 usft

Wellbore	STK				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	09/12/11	9.65	63.77	50,917

Design	STK				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)	
	0.0	0.0	0.0	317.14	

Survey Program	Date 10/05/11			
From	To	Survey (Wellbore)	Tool Name	Description
(usft)	(usft)			
264.0	7,815.0	Survey #1 (STK)	MWD	MWD - Standard

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
264.0	1.67	43.31	264.0	2.8	2.6	0.3	0.63	0.63	0.00
360.0	2.02	44.47	359.9	5.0	4.8	0.4	0.37	0.36	1.21
455.0	2.20	47.93	454.8	7.4	7.3	0.5	0.23	0.19	3.64
550.0	2.46	48.85	549.8	10.0	10.2	0.4	0.28	0.27	0.97
646.0	2.64	51.46	645.7	12.7	13.5	0.2	0.22	0.19	2.72
742.0	2.90	53.61	741.6	15.6	17.2	-0.3	0.29	0.27	2.24
838.0	2.90	55.17	837.4	18.4	21.1	-0.9	0.08	0.00	1.63
933.0	3.25	53.21	932.3	21.4	25.2	-1.5	0.38	0.37	-2.06
1,029.0	3.52	50.23	1,028.1	24.9	29.7	-2.0	0.34	0.28	-3.10

Survey Report

Company: Energen Resources
Project: Rio Arriba County
Site: Sec24 T32N-R04W - 13B
Well: Carracas 13B #16
Wellbore: STK
Design: STK

Local Co-ordinate Reference: Well Carracas 13B #16
TVD Reference: WELL @ 6975.0usft (Original Well Elev)
MD Reference: WELL @ 6975.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
1,124.0	3.96	52.82	1,122.9	28.7	34.5	-2.4	0.50	0.46	2.73	
1,220.0	4.22	53.29	1,218.7	32.8	40.0	-3.1	0.27	0.27	0.49	
1,283.0	4.13	54.52	1,281.5	35.5	43.7	-3.7	0.20	-0.14	1.95	
1,315.0	4.22	52.77	1,313.4	36.9	45.6	-3.9	0.49	0.28	-5.47	
1,347.0	4.75	53.40	1,345.3	38.4	47.6	-4.2	1.66	1.66	1.97	
1,379.0	6.68	54.96	1,377.2	40.3	50.2	-4.6	6.05	6.03	4.88	
1,411.0	8.79	56.78	1,408.9	42.7	53.8	-5.3	6.64	6.59	5.69	
1,443.0	10.55	57.48	1,440.4	45.6	58.3	-6.2	5.51	5.50	2.19	
1,474.0	12.31	56.74	1,470.8	49.0	63.4	-7.3	5.70	5.68	-2.39	
1,506.0	14.07	55.99	1,502.0	53.0	69.5	-8.4	5.53	5.50	-2.34	
1,538.0	15.83	57.01	1,532.9	57.6	76.4	-9.8	5.56	5.50	3.19	
1,570.0	17.59	56.96	1,563.5	62.6	84.1	-11.3	5.50	5.50	-0.16	
1,602.0	19.52	56.07	1,593.9	68.2	92.6	-13.0	6.10	6.03	-2.78	
1,634.0	21.28	54.50	1,623.9	74.5	101.8	-14.6	5.76	5.50	-4.91	
1,665.0	22.95	52.50	1,652.6	81.5	111.1	-15.9	5.91	5.39	-6.45	
1,697.0	24.71	53.11	1,681.8	89.3	121.4	-17.1	5.55	5.50	1.91	
1,729.0	26.56	53.19	1,710.7	97.6	132.5	-18.6	5.78	5.78	0.25	
1,761.0	28.23	53.23	1,739.1	106.4	144.3	-20.1	5.22	5.22	0.13	
1,793.0	29.99	53.85	1,767.1	115.7	156.8	-21.9	5.58	5.50	1.94	
1,825.0	31.66	53.84	1,794.5	125.3	170.1	-23.8	5.22	5.22	-0.03	
1,857.0	33.33	53.88	1,821.5	135.5	183.9	-25.8	5.22	5.22	0.13	
1,889.0	35.26	52.89	1,848.0	146.2	198.4	-27.8	6.28	6.03	-3.09	
1,920.0	37.55	52.87	1,872.9	157.3	213.1	-29.6	7.39	7.39	-0.06	
1,952.0	39.22	52.78	1,898.0	169.3	228.9	-31.6	5.22	5.22	-0.28	
1,983.0	40.36	52.73	1,921.8	181.4	244.7	-33.5	3.68	3.68	-0.16	
2,013.0	41.94	53.54	1,944.4	193.2	260.5	-35.6	5.56	5.27	2.70	
2,045.0	43.88	54.17	1,967.8	206.0	278.1	-38.1	6.21	6.06	1.97	
2,077.0	45.73	54.57	1,990.5	219.2	296.4	-41.0	5.85	5.78	1.25	
2,108.0	47.66	55.00	2,011.8	232.2	314.9	-44.0	6.31	6.23	1.39	
2,140.0	49.07	54.23	2,033.1	246.0	334.4	-47.1	4.76	4.41	-2.41	
2,172.0	49.07	50.83	2,054.0	260.7	353.5	-49.4	8.03	0.00	-10.63	
2,203.0	49.33	47.72	2,074.3	276.0	371.3	-50.2	7.64	0.84	-10.03	
2,234.0	49.68	45.24	2,094.4	292.3	388.4	-50.0	6.19	1.13	-8.00	
2,265.0	50.30	42.38	2,114.4	309.4	404.8	-48.6	7.34	2.00	-9.23	
2,295.0	51.18	40.53	2,133.3	326.8	420.2	-46.3	5.60	2.93	-6.17	
2,325.0	51.97	38.55	2,152.0	344.9	435.2	-43.2	5.80	2.63	-6.60	
2,355.0	52.23	36.19	2,170.4	363.8	449.5	-39.1	6.27	0.87	-7.87	
2,386.0	52.67	35.07	2,189.3	383.7	463.9	-34.2	3.20	1.42	-3.61	
2,418.0	52.58	34.03	2,208.7	404.7	478.3	-28.7	2.60	-0.28	-3.25	
2,447.0	52.76	32.41	2,226.3	424.0	490.9	-23.1	4.49	0.62	-5.59	
2,477.0	53.11	30.27	2,244.4	444.4	503.4	-16.6	5.81	1.17	-7.13	
2,507.0	53.11	27.99	2,262.4	465.4	515.0	-9.2	6.08	0.00	-7.60	
2,537.0	53.46	25.77	2,280.4	486.8	525.9	-0.9	6.05	1.17	-7.40	
2,568.0	53.55	23.10	2,298.8	509.5	536.2	8.7	6.93	0.29	-8.61	

Survey Report

Company: Energen Resources
Project: Rio Arriba County
Site: Sec24 T32N-R04W - 13B
Well: Carracas 13B #16
Wellbore: STK
Design: STK

Local Co-ordinate Reference: Well Carracas 13B #16
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Database: EDM 5000.1 Single User Db

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,598.0	53.64	20.57	2,316.6	531.9	545.2	19.1	6.79	0.30	-8.43
2,628.0	52.85	17.96	2,334.6	554.6	553.1	30.3	7.45	-2.63	-8.70
2,660.0	53.38	15.54	2,353.8	579.1	560.5	43.2	6.27	1.66	-7.56
2,690.0	54.34	13.82	2,371.5	602.5	566.6	56.2	5.63	3.20	-5.73
2,713.0	54.73	12.20	2,384.8	620.8	570.9	66.8	5.98	1.70	-7.04
2,723.0	55.05	12.64	2,390.6	628.8	572.6	71.4	4.82	3.20	4.40
2,753.0	57.24	11.73	2,407.3	653.1	577.9	85.7	7.72	7.30	-3.03
2,783.0	59.88	10.70	2,422.9	678.2	582.8	100.7	9.27	8.80	-3.43
2,814.0	61.99	9.44	2,438.0	704.9	587.6	117.0	7.68	6.81	-4.06
2,844.0	63.49	7.07	2,451.7	731.3	591.4	133.8	8.62	5.00	-7.90
2,873.0	64.63	4.78	2,464.4	757.2	594.1	151.0	8.12	3.93	-7.90
2,903.0	64.63	2.03	2,477.3	784.3	595.7	169.7	8.28	0.00	-9.17
2,933.0	64.81	359.70	2,490.1	811.4	596.1	189.3	7.05	0.60	-7.77
2,963.0	64.63	357.66	2,502.9	838.5	595.5	209.6	6.18	-0.60	-6.80
2,993.0	65.16	355.72	2,515.6	865.7	593.9	230.6	6.12	1.77	-6.47
3,024.0	65.69	354.01	2,528.5	893.7	591.4	252.9	5.30	1.71	-5.52
3,054.0	66.30	352.21	2,540.7	920.9	588.1	275.0	5.85	2.03	-6.00
3,084.0	66.39	350.80	2,552.7	948.1	584.0	297.7	4.32	0.30	-4.70
3,115.0	66.92	349.37	2,565.0	976.1	579.1	321.6	4.57	1.71	-4.61
3,145.0	68.59	347.38	2,576.4	1,003.3	573.5	345.3	8.29	5.57	-6.63
3,175.0	70.52	345.48	2,586.9	1,030.7	566.9	369.9	8.75	6.43	-6.33
3,206.0	71.49	343.72	2,597.0	1,058.9	559.2	395.9	6.21	3.13	-5.68
3,235.0	72.28	342.41	2,606.0	1,085.3	551.1	420.7	5.08	2.72	-4.52
3,267.0	73.51	340.64	2,615.4	1,114.3	541.4	448.5	6.54	3.84	-5.53
3,297.0	74.74	339.03	2,623.6	1,141.4	531.5	475.1	6.59	4.10	-5.37
3,329.0	76.06	337.57	2,631.7	1,170.1	520.0	504.0	6.04	4.13	-4.56
3,360.0	77.82	335.30	2,638.7	1,197.8	508.0	532.5	9.12	5.68	-7.32
3,392.0	79.14	333.33	2,645.1	1,226.1	494.4	562.5	7.31	4.13	-6.16
3,424.0	79.67	331.91	2,650.9	1,254.0	479.9	592.8	4.67	1.66	-4.44
3,456.0	80.37	330.89	2,656.5	1,281.7	464.8	623.3	3.83	2.19	-3.19
3,488.0	81.87	328.56	2,661.4	1,309.0	448.9	654.2	8.59	4.69	-7.28
3,520.0	84.06	326.45	2,665.3	1,335.8	431.8	685.4	9.47	6.84	-6.59
3,552.0	85.47	324.24	2,668.3	1,362.0	413.7	716.9	8.17	4.41	-6.91
3,575.0	86.10	324.19	2,670.0	1,380.6	400.3	739.7	2.76	2.75	-0.22
"Coal Entrance" 3575'MD / 2670'TVD									
3,584.0	86.35	324.17	2,670.6	1,387.9	395.0	748.6	2.76	2.75	-0.22
3,616.0	87.23	323.93	2,672.3	1,413.7	376.3	780.3	2.85	2.75	-0.75
3,648.0	89.25	322.39	2,673.3	1,439.3	357.1	812.1	7.94	6.31	-4.81
3,679.0	91.01	320.70	2,673.3	1,463.6	337.8	843.0	7.87	5.68	-5.45
3,702.0	91.01	319.41	2,672.9	1,481.2	323.1	866.0	5.61	0.00	-5.61
3,759.0	91.96	318.59	2,671.4	1,524.2	285.7	923.0	2.20	1.66	-1.45
"Casing Shoe" 3759'MD / 2671'TVD									
3,787.0	92.42	318.18	2,670.3	1,545.1	267.1	950.9	2.20	1.66	-1.45

Survey Report

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Database: EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,851.0	92.24	316.51	2,667.7	1,592.2	223.8	1,014.9	2.62	-0.28	-2.61
3,914.0	90.84	316.51	2,666.0	1,637.9	180.4	1,077.9	2.22	-2.22	0.00
3,978.0	92.24	316.48	2,664.3	1,684.3	136.4	1,141.8	2.19	2.19	-0.05
4,041.0	92.51	315.61	2,661.7	1,729.6	92.7	1,204.8	1.44	0.43	-1.38
4,105.0	91.63	317.28	2,659.4	1,775.9	48.6	1,268.7	2.95	-1.38	2.61
4,168.0	89.69	317.39	2,658.6	1,822.2	5.9	1,331.7	3.08	-3.08	0.17
4,232.0	88.20	318.03	2,659.8	1,869.6	-37.1	1,395.7	2.53	-2.33	1.00
4,296.0	86.97	318.43	2,662.5	1,917.3	-79.7	1,459.6	2.02	-1.92	0.63
4,359.0	87.41	318.95	2,665.6	1,964.5	-121.3	1,522.5	1.08	0.70	0.83
4,423.0	91.01	318.66	2,666.5	2,012.7	-163.4	1,586.5	5.64	5.63	-0.45
4,486.0	90.04	318.53	2,665.9	2,059.9	-205.1	1,649.4	1.55	-1.54	-0.21
4,550.0	88.46	317.31	2,666.7	2,107.4	-247.9	1,713.4	3.12	-2.47	-1.91
4,613.0	90.92	317.08	2,667.1	2,153.6	-290.7	1,776.4	3.92	3.90	-0.37
4,676.0	93.47	317.67	2,664.7	2,200.0	-333.4	1,839.4	4.15	4.05	0.94
4,739.0	92.24	316.73	2,661.5	2,246.1	-376.1	1,902.3	2.46	-1.95	-1.49
4,802.0	91.80	316.33	2,659.3	2,291.8	-419.4	1,965.3	0.94	-0.70	-0.63
4,866.0	91.19	314.02	2,657.6	2,337.2	-464.5	2,029.2	3.73	-0.95	-3.61
4,929.0	88.37	314.04	2,657.9	2,381.0	-509.8	2,092.1	4.48	-4.48	0.03
4,993.0	90.13	316.49	2,658.7	2,426.4	-554.9	2,156.0	4.71	-2.75	-3.83
5,056.0	89.43	317.62	2,659.0	2,472.5	-597.8	2,219.0	2.11	-1.11	1.79
5,120.0	86.70	317.55	2,661.1	2,519.8	-640.9	2,283.0	4.27	-4.27	-0.11
5,181.0	87.23	317.88	2,664.4	2,564.8	-681.9	2,343.9	1.02	0.87	0.54
5,242.0	88.81	319.44	2,666.5	2,610.6	-722.2	2,404.8	3.64	2.59	2.56
5,303.0	90.48	319.73	2,666.8	2,657.0	-761.7	2,465.8	2.78	2.74	0.48
5,364.0	90.04	319.36	2,666.6	2,703.5	-801.3	2,526.7	0.94	-0.72	-0.61
5,426.0	89.78	319.53	2,666.7	2,750.6	-841.6	2,588.7	0.50	-0.42	0.27
5,487.0	89.08	317.99	2,667.3	2,796.4	-881.8	2,649.7	2.77	-1.15	-2.52
5,548.0	88.72	318.02	2,668.4	2,841.8	-922.6	2,710.6	0.59	-0.59	0.05
5,608.0	91.10	316.85	2,668.5	2,885.9	-963.2	2,770.6	4.42	3.97	-1.95
5,668.0	91.19	315.42	2,667.3	2,929.2	-1,004.8	2,830.6	2.39	0.15	-2.38
5,729.0	89.78	315.53	2,666.8	2,972.7	-1,047.5	2,891.6	2.32	-2.31	0.18
5,788.0	91.80	315.97	2,666.0	3,014.9	-1,088.7	2,950.5	3.50	3.42	0.75
5,850.0	92.42	315.73	2,663.7	3,059.4	-1,131.9	3,012.5	1.07	1.00	-0.39
5,910.0	91.28	315.84	2,661.8	3,102.4	-1,173.7	3,072.4	1.91	-1.90	0.18
5,972.0	90.84	315.66	2,660.6	3,146.8	-1,216.9	3,134.4	0.77	-0.71	-0.29
6,032.0	92.07	315.83	2,659.1	3,189.7	-1,258.8	3,194.4	2.07	2.05	0.28
6,092.0	90.92	315.75	2,657.6	3,232.7	-1,300.6	3,254.3	1.92	-1.92	-0.13
6,153.0	90.66	316.52	2,656.7	3,276.7	-1,342.9	3,315.3	1.33	-0.43	1.26
6,212.0	90.66	317.35	2,656.0	3,319.8	-1,383.2	3,374.3	1.41	0.00	1.41
6,274.0	91.98	317.76	2,654.6	3,365.5	-1,425.0	3,436.3	2.23	2.13	0.66
6,334.0	93.03	317.83	2,652.0	3,409.9	-1,465.3	3,496.2	1.75	1.75	0.12
6,395.0	92.33	318.56	2,649.1	3,455.4	-1,505.9	3,557.2	1.66	-1.15	1.20
6,457.0	91.01	317.29	2,647.3	3,501.4	-1,547.4	3,619.1	2.95	-2.13	-2.05
6,518.0	90.04	317.25	2,646.8	3,546.2	-1,588.8	3,680.1	1.59	-1.59	-0.07

Survey Report

Company: Energen Resources
 Project: Rio Arriba County
 Site: Sec24 T32N-R04W - 13B
 Well: Carracas 13B #16
 Wellbore: STK
 Design: STK

Local Co-ordinate Reference: Well Carracas 13B #16
 TVD Reference: WELL @ 6975.0usft (Original Well Elev)
 MD Reference: WELL @ 6975.0usft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
6,533.0	90.04	317.30	2,646.8	3,557.2	-1,599.0	3,695.1	0.33	0.00	0.33	
6,594.0	90.13	317.71	2,646.7	3,602.2	-1,640.2	3,756.1	0.69	0.15	0.67	
6,654.0	88.99	318.56	2,647.1	3,646.8	-1,680.2	3,816.1	2.37	-1.90	1.42	
6,716.0	89.08	319.35	2,648.2	3,693.6	-1,720.9	3,878.1	1.28	0.15	1.27	
6,777.0	89.08	319.76	2,649.1	3,740.0	-1,760.5	3,939.0	0.67	0.00	0.67	
6,838.0	89.34	319.40	2,650.0	3,786.4	-1,800.0	3,999.9	0.73	0.43	-0.59	
6,899.0	88.46	319.51	2,651.2	3,832.8	-1,839.7	4,060.9	1.45	-1.44	0.18	
6,958.0	91.19	319.74	2,651.3	3,877.7	-1,877.9	4,119.8	4.64	4.63	0.39	
7,019.0	90.22	318.92	2,650.6	3,924.0	-1,917.7	4,180.8	2.08	-1.59	-1.34	
7,079.0	90.31	319.48	2,650.3	3,969.4	-1,956.9	4,240.7	0.95	0.15	0.93	
7,140.0	90.57	319.95	2,649.8	4,015.9	-1,996.3	4,301.7	0.88	0.43	0.77	
7,200.0	92.51	319.94	2,648.2	4,061.9	-2,034.9	4,361.6	3.23	3.23	-0.02	
7,260.0	93.03	320.55	2,645.3	4,107.9	-2,073.2	4,421.4	1.34	0.87	1.02	
7,319.0	93.30	319.49	2,642.1	4,153.1	-2,111.1	4,480.2	1.85	0.46	-1.80	
7,380.0	91.54	317.68	2,639.5	4,198.8	-2,151.4	4,541.2	4.14	-2.89	-2.97	
7,441.0	90.57	316.66	2,638.4	4,243.5	-2,192.8	4,602.2	2.31	-1.59	-1.67	
7,502.0	90.84	315.10	2,637.6	4,287.3	-2,235.3	4,663.1	2.60	0.44	-2.56	
7,563.0	92.86	314.17	2,635.7	4,330.1	-2,278.7	4,724.0	3.65	-3.31	-1.52	
7,625.0	93.56	314.08	2,632.2	4,373.2	-2,323.1	4,785.9	1.14	1.13	-0.15	
7,687.0	91.98	313.69	2,629.2	4,416.1	-2,367.8	4,847.7	2.62	-2.55	-0.63	
7,749.0	90.92	313.77	2,627.6	4,459.0	-2,412.5	4,909.6	1.71	-1.71	0.13	
7,815.0	90.92	313.77	2,626.6	4,504.6	-2,460.2	4,975.4	0.00	0.00	0.00	
"Proj TD" 7815'MD / 2627'TVD										

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N-S (usft)	+E-W (usft)	Comment	
3,575.0	2,670.0	1,380.6	400.3	"Coal Entrance" 3575'MD / 2670'TVD	
3,759.0	2,671.4	1,524.2	285.7	"Casing Shoe" 3759'MD / 2671'TVD	
7,815.0	2,626.6	4,504.6	-2,460.2	"Proj TD" 7815'MD / 2627'TVD	

Checked By: _____ Approved By: _____ Date: _____